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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,591	06/19/2001	Tobias Krimmer	G&C 30566.193-US-01	4262

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EXAMINER

PALADINI, ALBERT WILLIAM

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/885,591	KRIMMER, TOBIAS	
	Examiner	Art Unit	
	Albert W Paladini	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to figure 3, lines 5-7 on page 10 state "An object of the 3D model is selected as the first step 60 of the method. For example, the selection may take place in order of decreasing distance of the object from the viewer such that the suppression of hidden lines is facilitated." This selection example is not understood. If the distance is decreased so that the object is brought closer to the viewer, this does not result in the suppression of hidden lines.

Lines 7-10 on page 7 state "When the selected object is determined, a check is made in test 62 whether or not a 2D representation of the object is available that is suitable for the 2D view to be created." If the screw, depicted in figure 2 as an example, is the desired object, it is assumed that the screw has a specific part number, and that data about the screw is contained in some storage device. Further assume that some of this data defines a top view, side view, front view, etc. of the screw. The criteria for

determining whether a specific representation is suitable is not defined, nor is the method of running the test to ascertain suitability described.

Appropriate correction and clarification are required.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 2, 4, 6, 7, 14 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2

It is not understood what is meant by the "2D presentation" "is a symbolic representation." A two dimensional view or presentation is generally a view of a three dimensional object, taken from a given position relative to the object, projected onto a two dimensional surface. The term "symbolic" does not appear to apply.

Claim 4

If a two-dimensional view of an object is obtained from a three dimensional model of the object, it is not understood how other objects would cause lines to be suppressed or hidden.

Claim 6

It is not understood what is meant by the 2D representation is used as a flat object. If this means that a solid model of some material is shaped into a physical object, there is no support in the specification for this.

Claim 14

It is not understood what is meant by the 2D representation is used as a flat object. If this means that a solid model of some material is shaped into a physical object, there is no support in the specification for this.

Claim 20

It is not understood what is meant by the 2D representation is used as a flat object. If this means that a solid model of some material is shaped into a physical object, there is no support in the specification for this.

Appropriate correction and clarification is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe (5701403).

Watanabe discloses a CAS system utilized to obtain two-dimensional objects from a three-dimensional model or object. In figure 30, the CAD system, in step ST57, temporarily creates a two-dimensional figure by projection of the solid object to be arranged on another view plane, which differs from the view plane and stores the created two-dimensional figure data in a memory. The CAD system advances to step ST58 wherein it compares two-dimensional figures, which belong to the other view plane with the above two-dimensional figure temporarily stored in the memory. Then, the CAD system looks for a figure on the other view plane, which corresponds to the destination figure, which has the same shape as the temporarily projected two-dimensional figure and are apart from the temporarily projected two-dimensional figure in the direction of the viewing vector of the view plane (VW1) 308. In step ST59, the CAD system judges whether or not there exists such a figure on the other view plane. If there exists a figure, which satisfies the above condition, the CAD system obtains the transformation matrix to, move the solid object from the translation vector to make the temporarily projected two-dimensional figure overlap the other two-dimensional figure found in step ST58, in step ST60. After the CAD system applies the transformation matrix to the solid object, the CAD system enables the drawing processing section to create two-dimensional orthographic views of the constructed product model. The CAD system repeats steps ST58 and ST59 until it finds a figure which has the same shape as the temporarily projected two-dimensional figure and are apart from the temporarily projected two-dimensional figure in the direction of the viewing vector of the view plane (VW1) 308. If there does not exist a figure which satisfies this condition, the CAD system returns to step ST 57 wherein it temporarily creates a two-dimensional figure by projection of the solid object to be arranged on another view plane and stores the temporarily created two-dimensional figure data in the memory. After that, the CAD system repeats steps ST58 and ST59. Thus, the appropriate figure is either selected from memory or created.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baran (6603486) in view of Itoh (5692115).

Baran discloses a system for creating and storing two dimensional drawings and images. He states on lines 11-31 in column 11 "Alternatively, a two-dimensional representation may be converted to a drawing file. Referring to FIG. 21, a data flow diagram 300 illustrates a process that converts a two-dimensional file 302, such as a file created using AutoCad software. Note that, in some embodiments, the file 302 may contain other information that is not used by the system described herein, such as other 3-D or pseudo 3-D information. A reformatter 304 converts data from the two-dimensional file 302 and stores the data in a generic file 306. Note that the two-dimensional file 302 may contain data in any one of a number of formats, such as the AutoCad format. The reformatter 304 simply accesses and reads the particular format of the two-dimensional file 302 and converts the contents thereof to a generic format that can be more easily accessed by follow on processing. The two-dimensional file 302 may be created using any one of a number of commercially available two-dimensional drafting packages, such as the AutoCad package provided by AutoDesk, that may be accessed by the reformatter 304 to provide the generic file 306." Baran does not disclose calculating a 2D projection of the object if the two-dimensional representation is not available as recited in claims 1, 10, and 16.

Itoh discloses calculating a 2D projection of an object on lines 41 to 65 of column 1 where he states "In order to generate a hard copy of an object, it is necessary to transform the three-dimensional image thereof into a two-dimensional image. Therefore, it is known to provide an arrangement in which the user of a CAD, CAM, or CAE system can select one viewing direction, and then the system generates a two-dimensional image of the object when viewed in that direction. That two-dimensional image is derived directly from the three-dimensional image, using the model data, and therefore exactly the same formation is presented in the three-dimensional image. Thus, for example, the three-dimensional CAD system shown in, for example the "HICAD/DESIGN/W Function Addition 205 G-3 625 of HITACHI 2050G Series Manual" is a system in which an image of an object (called a projection drawing) is obtained from three-dimensional model data, by transforming the three-dimensional image corresponding to the model data on the basis of a specified viewing direction. Contour data derived from the three-dimensional model data is obtained, and the three-dimensional model data is multiplied by a projection conversion matrix so as to calculate corresponding two-dimensional data. The projection drawings then are obtained by connecting the resulting data using line segments. This means

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that the projection drawing is a contour image of the three-dimensional model data and contains no other information."

If a two dimensional representation of a three-dimensional object was not stored in the system disclosed by Baran, it would have been obvious to one skilled in the art to utilize the system disclosed by Itoh to calculate the 2D representation using Itoh's technique.

Relevant Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tognazzini (6532021) discloses a visualization system which is also directed to a system for accessing information about items available for acquisition, including a network, a first storage device containing at least one three dimensional representation of one of the items connected to the network, a computing device connected to the network, configured to download three dimensional representations and to display two dimensional perspective views of them, and a device for measuring distance between a display screen and a location in the environment of the computing device. The computing device displays two dimensional perspective views of the three dimensional representations at the location with a scale determined by the distance between the display screen and the location in the environment.

Mortlock (6549200) discloses a method of generating an image representing a three-dimensional object, the three-dimensional object being modeled as a stored set, of parameters representing a model of a three-dimensional object and at least two two-dimensional images of the object, each image representing the object from a unique direction of view, the parameters comprising parameters defining the positions of a plurality of vertex points in a virtual space and

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parameters defining relationships between vertex points and hence surface elements of the object.

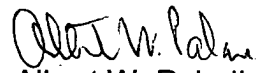
Hernandez (6654027) discloses a method and system for identifying elements in three-dimensional drawings using a display, which shows depictions of the object from various perspectives. For example, the object is shown as an isometric projection, the front, left, and top views are shown. It is to be understood that other views could also be shown, such as the right, back and bottom views. In addition a three dimensional representation of the object is shown in a separate window. In the three dimensional viewer, the object can be rotated in three dimensions according to the user's instructions to visualize the object from whatever perspective the user prefers.

10. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (572) 272-3748. The examiner can normally be reached from 7:30 to 3:30 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (572) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

December 17, 2004


Albert W. Paladini
Primary Examiner
Art Unit 2125